FRD ACTIVITIES REPORT
October 2005

Research Programs

Urban Dispersion Program (New York City)

Review and verification of the real-time analyzer data from UDP were completed this month. Final data files have been generated and checked for correctness. We are currently working with PNNL to determine correct longitude and latitude for each sampler, van and release location. Hopefully, their GIS information system will provide reasonable locations much more easily than the other available methods. We are also waiting for information from the indoor study team on perfluorocarbon tracer concentrations around the real-time analyzers. Some preliminary information we have indicates that there could be a significant interference of the PFT's with the measurement of SF_6. We will need to quantify this effect before we release the data for general use. (Roger Carter, 208-526-2745, Debbie Lacroix, and Jason Rich)

ET Probe

The ET probe draft manuscript intended for the *Journal of Atmospheric and Oceanic Technology* was completed in October, with the exception of one section that will be written by the coauthors from ATDD. The ARL review process will begin once this last section is in place. The 27th Conference on Hurricanes and Tropical Meteorology is scheduled for next April in Monterey, CA, with an abstract deadline of 15 November. An abstract describing the ET probe data collected in Hurricanes Frances and Ivan is being planned for this conference. A more comprehensive journal manuscript describing the hurricane data is also in the works. (Richard Eckman, 208-526-2740, Ron Dobosy, ATDD)

Smart Balloon

In October, several ARL divisions held a teleconference to discuss possible ARL involvement in the TexAQS II air quality study next year in Texas. FRD's potential contribution would be the Smart Balloons, which could provide information about the trajectories of pollutant plumes and ozone concentrations within the plumes. There has already been interest expressed by our university collaborators in having the Smart Balloons at TexAQS II, but the October teleconference focused on obtaining NOAA support. In the end, NOAA decided not to provide any support for Smart Balloon involvement, so any FRD presence at the experiment will have to be supported through our university collaborators. This is yet another example of NOAA on the one hand criticizing ARL for seeking extramural support for science while on the other hand failing to redress the situation when given an opportunity. (Richard Eckman, 208-526-2740, and Randy Johnson)

Cooperative Research with DOE NE-ID (Idaho National Laboratory)

Emergency Operations Center (EOC)

The last of the annual requalification drills at the Idaho National Laboratory EOC occurred on 18 October. All of the FRD personnel who support the EOC operations have attended and taken part in at least two drills this past year. During this latest drill, a large earthquake caused a fire and several chemical releases at the Material Fuels Complex. Everything went very well during the drill as the NOAA team provided meteorological support and operated the MDIFF transport and dispersion model. (Jason Rich, 208-526-9513, and Roger Carter)

In order for each NOAA team member to maintain their EOC Emergency Response Organization qualification, he/she must participate in either a drill, exercise, or activation and one requalification classroom training during the year. All of the requalification drills have been completed for the year. Team A attended their requalification classroom training on October 27. (Jason Rich, 208-526-9513)

Transport and Dispersion Modeling

Discussions were held with INL contractors on the interpretation of "worst-case" meteorology for dispersion at INL. There have been attempts to define such things as the "95th percentile meteorology" or the "50th percentile meteorology" based on the outputs from a large number of dispersion model runs. It was pointed out that the procedure for assigning these meteorology percentiles is generally invalid, because they are based on the frequency distribution of the model's total integrated concentration (TIC). Unless there is a one-to-one correspondence between meteorology and TIC, it makes no sense to back out the meteorology corresponding to a specific percentile in the TIC distribution. (Richard Eckman, 208-526-2740)